

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/038,230 03/11/98 KOYANAGI

T 1217-980347

EXAMINER

IM22/0626

RUSSELL D ORKIN
700 KOPPERS BUILDING
436 SEVENTH AVENUE
PITTSBURGH PA 15219-1818

METZMAIER, D

ART UNIT

PAPER NUMBER

22

1712

DATE MAILED:

06/26/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/038,230

Applicant(s)
Koyanagi et al.

Examiner
Daniel S. Metzmaier

Art Unit
1712



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 3, 2001
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/038,230.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other:

Art Unit: 1712

DETAILED ACTION

Claim 1 is pending in the instant application. This action is responsive to the response filed April 3, 2001, Paper No. 20 and 21.

Continued Prosecution Application

1. The request filed on April 3, 2001, paper no. 20, for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/038,230 is acceptable and a CPA has been established. An action on the CPA follows.

Response to Amendment

2. The cross-noting amendment to the specification after the title should be deleted as redundant. See 37 C.F.R. 1.78(2) and M.P.E.P. § 202.01, Seventh Edition, Revision 1, Feb. 2000.

Claims interpretation

3. Applicant's claim is directed to inorganic oxide sols comprising a modified composite oxide particulates. Said sols have a dielectric constant of 10 to 85, a particle size range of 11 to 30 nanometers, and a specific classes of organosilane compounds. Said compounds are further limited to exhibiting a molecular polarizability of 2×10^{-40} to $850 \times 10^{-40} \text{ C}^2 \text{ m}^2 \text{ J}^{-1}$. Said sols have been limited to a specified silica to other inorganic oxide ratio of 3 to 500.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 1712

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

5. Claim 1 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Enomoto et al., US 5,935,700, in view of Yoneda et al, US 5,316,714. Enomoto et al (abstract, column 3, et seq; examples, and claims) disclose composite particles of silica and at least one other inorganic oxide other than silica. Suitable particles are taught (columns 3 to 4, lines 62 to 10) to range in size from 10 nm to 2 microns. Said range includes applicants claimed range of 10 to 30 nm. Said range is defined only by applicants' examples and applicants teach (page 6, lines 20-23) the size of the composite particulates is not particularly limited as long as the sol is stable.

Enomoto et al (column 7, lines 26-47) teaches the composite oxides may be employed as an organosol in alcohols, glycols and ketones which read on the required dielectric constant claimed. Enomoto et al further teaches the particles may be surface modified by silane coupling

Art Unit: 1712

agents. Enomoto et al (examples ; particularly example 6) teaches the silica to other oxide ratio within the range of 3 to 500.

Enomoto et al differs from the claims in the particular silane coupling agent treating said composition.

Yoneda et al is cited on the Enomoto et al reference. Yoneda et al teaches glycol dispersions for imparting slipperyness to polyester films. Yoneda et al (column 7, lines 15 et seq) teaches coupling agents for treating the particulate sols including those exhibiting a molecular polarizability claimed. Please contrast the Yoneda et al species with those disclosed at page 22, table 1 of the specification.

These references are combinable because they teach providing slipperyness to polymer films. Said references are directed to related art as evidenced by the citation of Yoneda et al on the Enomoto et al patent. It would have been obvious to one of ordinary skilled in the art at the time of applicants invention to employ the coupling agents taught in the Yoneda et al reference as obvious coupling agents conventional in the art and broadly taught in the Enomoto et al reference.

Furthermore, the skilled artisan would have been motivated to employ the aminosilane as an exemplified (table 2c) species for the advantage of providing slipperyness.

Applicants comparative data does not show criticality for the use different silanes having the molecular polarizability in glycol suspensions. Furthermore, applicants state the particle size is critical to the extent a stable sol is formed.

Art Unit: 1712

One of ordinary skilled in the art at the time of applicants invention to employ would have reasonably expected the formation of glycol sols surface modified with the silanes of Yoneda et al would have produced stable sols upon reading the Enomoto et al reference in view of the Yoneda et al reference.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on Monday through Friday from nine to five-thirty.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson, can be reached at (703)308-2340.

Official Papers may be submitted to **Group 1700** by facsimile transmission at (703)872-9310 and Official After Final facsimile transmissions may be submitted to **Group 1700** by facsimile transmission at (703)872-9311 in accordance with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Any inquiry of a general nature or relating to the status of this application should be directed to the **Group 1700** receptionist whose telephone number is (703) 308-0661.

DSM
June 22, 2001


Daniel S. Metzmaier
Patent Examiner
Art Unit 1712